


section 3 of the Final Rejection of November 21, 2000 (Paper No. 7). Claims 1-16 stand further rejected under 35 U.S.C. 112, first paragraph, for lack of enablement, specifically, for the use of the phrase "morphologically".

 The term "morphologically" is not literally provided in the original disclosure. However, as the Applicant has pointed out previously, the claimed plasma treatment causes a "micro-sandblasting effect" to the surface, as well as chemical changes (specification, page 3). It is respectfully submitted that any practitioner of ordinary skill in the art would know, a "micro-sandblasting effect" would cause morphological changes to occur to the surface.

Furthermore, according to Webster's New World Dictionary of the American Language, (Second College Edition, World Publishing Co.), the term "morphology" is defined as follows: "Any scientific study of form and structure, as in physical geography; form and structure, as of an organism, regarded as a whole" (see attached copy of page 927 of this publication). The term "morphological" is merely another word for the surface structure in a micro-region. As explained above, in the specification it is noted on page 3, lines 7-11, that the plasma treatment leads to a micro-sandblasting effect in the micro-region on the surface of the connecting area. This micro-sandblasting effect is simply paraphrased as the term "morphological".

If claim 1 were amended to adopt the literal language of the specification, rather than the term "morphological", claim 1 could read as follows: "...wherein said plasma treated connecting portion (7) is in a micro-sandblasting effect and chemically altered in a micro area..." If desired by the Examiner, an amendment to this effect could be made to claim 1.

However, claim 1 defines more clearly that the plasma treatment causes both chemical changes and morphological changes to the surface of the connection

portion. The specification must provide to the practitioner skilled in the art the information necessary to make and use the invention. Certainly, even a practitioner with minimal skill in plasma treatment would recognize that the disclosure of "causing micro-sandblasting effects" to the surface micro-area of the connection portion means that these effects constitute actual morphological changes to this surface.

Likewise, when construing the claims for purposes of determining enablement, the burden is on the Examiner to determine if a term is not well known in the art, or if there could be one or more meaning for the term. (MPEP 2164.04, first paragraph). The Applicant respectfully submits that the term "morphological changes" can only be construed to mean "physical or structural changes", as defined by the Webster Dictionary and as commonly understood to be the meaning by both lay people and those skilled in the relevant art.

The Applicant therefore respectfully requests withdrawal of the rejection of claims 1-16 under 35 U.S.C. 112, first paragraph.

Regarding the substantive rejection of the claims as unpatentable over the Krause and Heine references, the Applicant must maintain his position that the cited combination of references fails to disclose or suggest the present invention as defined in the claims. Krause describes in column 2, lines 4-17, that the physical structure of the substrate surface is not significantly altered by the corona or plasma treatment. This statement stands in complete opposition to the teachings of the present invention and the language of claim 1 of the present application, in which the plasma treatment leads to a micro-sandblasting effect and to chemical changes in the micro-area on the surface of the connection portion. It is not understandable how the practitioner could be led to alter the surface of the connection piece as the present invention teaches by a reference that teaches in the opposite direction, that

is, not to alter the physical substrate surface.

Heine et al likewise has no similarity to the subject matter of the present invention. This reference departs from the teachings of the present invention, in that the sealing element 4, 4' is connected to the carrier body 2, 2'. According to column 2, lines 48-54, a substance-lock connection between the plastic material of the sealing member 4, 4' and the plastic material of the carrier body 2, 2' is obtained by adding a small quantity of the plastic material which comprises the carrier body to the PTFE compound. This resulting connection is obtained from the fusing of the sealing member 4, 4' with the plastics of the carrier body 2, 2' by injection molding. In the specification of the instant application, such a method is already described and distinguished from the present invention. (See, for example, page 2, lines 3 through 11).

As set forth in the specification of the present application, plasma polymerization has no similarities to plasma activation. With the plasma activation of the present invention, it is not necessary to use a compatible plastic to connect the carrier 1 to the components 6, 28 and to fuse this connection. Indeed, this additional plastic material is not provided with the components of the present invention.

In addition, Heine et al also provide that instead of the plastic material of the carrier body, another form of plastic can be used that is compatible to the plastic of the carrier body 2, 2'. From the teachings of this reference, then, the practitioner learns that the plastic or the sealing element 4, 4' can be a component that is the same as that which makes up the carrier body or that is similar to the carrier body material. In both cases, an additional component is provided by which the connection of the sealing member 4, 4' to the carrier body 2, 2' is made possible.

So that no misunderstanding occurs with reference to Heine et al's column 3,

lines 5-11, the Applicant also wishes to point out the following, essential differences between the subject matter of the present invention and that of Hiene et al.

Heine et al describe the possibility of connecting a carrier body 2, 2' made of plastic to a sealing element 4, 4' made of PTFE. To this purpose, the surface of the PTFE-sealing element 4 is contacted with a plastic that is compatible with the plastic of the carrier body 2, 2', as provided in claims 1 and 2 as well as in column 2, lines 48 et seq of the Heine et al patent. As provided in column 3, lines 5-11 of Heine et al, the plastic that is compatible with the plastic of the carrier body 2, 2' is contacted through a plasma polymerization on the PTFE-sealing element 4, 4'. This plastic serves as a binding means, in order to connect the PTFE-sealing element 4, 4' with the carrier body 2, 2'. The connection takes place, then, through a fusing process of this plastic. Moreover, Heine et al is completely silent as to plasma treatment. In fact, Heine teaches again in a different direction by providing that a plastic is to be mixed with the PTFE and fused to the carrier body, which is made of plastic.

In contrast, the subject matter of the present invention is not concerned with any fusion process when the carrier is connected with components 6, 28. Therein lies an essential difference between the present invention and the subject matter of Heine.

The Applicant submits further that the combination of Heine et al and Krause et al does not render the claimed invention obvious, since, again, both references teach away from the present invention. Krause et al teach the practitioner that when joining two components through corona or plasma treatment, the surfaces of the portions are not physically altered. Heine et al provide the practitioner only with the suggestion of connecting two portions together by using an intermediate component, which is mixable with the material of the carrier body 2, 2'. Even if the practitioner

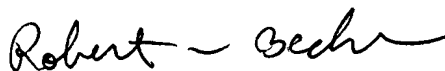
did combine Heine et al with Krause et al, the result would be a method of attaching two components through corona or plasma activation by using an intermediate adhesion support component, wherein the surface of the plasma treated portion is not physically changed. This result cannot be equated or compared to the present invention as defined in amended claim 1.

As amended claim 1 now distinctly provides, the surface of the plasma treated portion is chemically and morphologically altered and no intermediate adhesion support component is required to achieve the long-lasting connection between the components.

The Applicant therefore respectfully submits that claims 1-16 are not obvious over the cited combination of references to Heine et al and Krause et al. Further, the Applicant requests withdrawal of the rejection of these claims under Section 103 and reconsideration of the claims as herein presented.

In light of the foregoing amendment and arguments in support of patentability, the Applicant respectfully requests that this application now stands in condition for allowance. Action to this end is courteously solicited. Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call from her in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,



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